AMSAT News Service Weekly Bulletins
Issue: ANS-078
Date: 1994-03-19
Sources: amsat-ans-1994-ans-078-weekly.txt

SB SAT @ AMSAT $ANS-078.01
PHASE-3D STATUS REPORT

HR AMSAT NEWS SERVICE BULLETIN 078.01 FROM AMSAT HQ
SILVER SPRING, MD MARCH 19, 1994
TO ALL RADIO AMATEURS BT
BID: $ANS-078.01

AMSAT PHASE 3-D INTERNATIONAL SATELLITE BUILDERS MEET IN MARBURG--PROPELLANT TANKS DELIVERED

During the week of February 10-16, 1994, Dr. Karl Meinzer, DJ4ZC, AMSAT-DL President and Project Leader for the International AMSAT Phase-3D satellite, and Werner Haas, DJ5KQ, Vice-President of AMSAT-DL hosted a working meeting in Marburg, Germany to discuss recent progress on the project. Agenda items centered primarily around the spacecraft's electronic systems including the on-board computer (IHU) and RUDAK systems, as well as the progress now being made by team members on the spacecraft's other electronic modules.

Also during the meeting, the team took delivery of P3-D's main propellant tanks. The tanks were manufactured in Russia under contract from AMSAT-DL and in accordance with AMSAT specifications. Seven tanks were delivered, although one had been subjected to a destructive pressure test by its Russian manufacturer.

Not only have all the propellant tank specifications been fully achieved, but they've actually been significantly surpassed. Each tank can accommodate almost 50 liters of propellant. Favorable conditions for the purchase and delivery of these tanks was arranged through the efforts of AMSAT-UA (Russia). Following a brief inspection, the tanks were immediately shipped to Orlando, Florida, where integration of the satellite is now slated to begin this summer.

Dick Jansson, WD4FAB, AMSAT-NA Vice-President for Engineering, also attended the meeting, principally to discuss various aspects of the satellite's structure with Dr. Meinzer and Konrad Mueller, DG7FDQ. He reported on the good progress of the flight model structure's construc-tion, currently underway at Weber State University in Utah.

Also in attendance were Lyle Johnson, WA7GXD, Peter Guelzow, DB2OS, and Gerhard Metz, DG2CV. Lyle is known through his work with the Tucson Amateur Packet Radio (TAPR) group (which he co-founded) as well as for his work on the Microsats and on the P3-D GPS project. After much discussion, the team decided to again employ a cable wiring harness arrangement for Phase 3-D, similar to that used on AO-10 and AO-13, rather than an AART-based LAN design. However, the team decided to also fly a CAN bus and DB2OS's experimental LAN controller as part of the spacecraft's digital (RUDAK) transponder.

In a related decision, the group concluded that the AO-10/AO-13 1802-based Internal Housekeeping Unit (IHU) computer design would still be adequate for P3-D with some minor modifications. Lyle Johnson announced his willingness to redesign the IHU and to construct a flight unit. His offer was greatfully accepted.

Other meeting items centered on P3-D's RUDAK work now being done by

Peter Guelzow, Gerhard Metz, and Dr. Stefan Eckart, DL2MDL. This team has now decided to build two RUDAKs. The first will be a user-oriented digital communications module constructed by Lyle Johnson, in close cooperation with Peter Guelzow. This RUDAK, which has yet to be formally named, will be the one most P3-D satellite users will operate. A second, more experimental RUDAK (called RUDAK-E), will be built in Germany. It will promote experiments with advanced high speed modems, Digital Signal Processing (DSP) techniques, and new communications protocols.

In a host of other issues, Daniel Orban, ON4AOD, discussed details of the 24 GHz transmitter. Konrad Hupfer, DJ1EE, reported his progress in building the 250 watt U-Band (70 cm) final amplifier. Werner Haas displayed his first flight hardware consisting of two command receivers, a digital section, and the 70 cm exciter that will drive Konrad's 70 cm final amplifier. Freddy de Guchteneirie, ON6UG, reported his progress on the construction of dual V-Band and U-Band receiver "front-ends". Dr. Matjaz Vidmar, S51MV, reported he has now begun construction of the HF-Band, C-Band and S-Band receivers. He expects to deliver working prototypes in May.

While much work still remains to be done, Dr. Meinzer expressed his approval and sincere thanks to all participants for their superb work and close cooperation on this vitally important AMSAT international project. A complete text of this meeting's minutes has been prepared by Peter Guelzow, and has since been translated by Don Moe, DJ0HC/KE6MN. The text will be made available to the various international AMSAT Journals for possible inclusion in their upcoming editions.

[The AMSAT News Service (ANS) would like to thank Peter Guelzow, DB2OS, Don Moe, DJ0HC/KE6MN, Lyle Johnson, WA7GXD, and Keith Baker, KB1SF, for their assistance in writing, translating, and formatting the information contained in this bulletin item.]

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SB SAT @ AMSAT $ANS-078.02
ITAMSAT-OSCAR-26 PROBLEM

HR AMSAT NEWS SERVICE BULLETIN 078.02 FROM AMSAT HQ
SILVER SPRING, MD MARCH 19, 1994
TO ALL RADIO AMATEURS BT
BID: $ANS-078.02

ITAMSAT-OSCAR-26 (IO-26) Ground Team Discovers Problem

Starting last week the PSK modulation on the primary trasmitter became more and more difficult to decode. A residual carrier and lower output power seem to indicate a failure in the PSK balanced modulator, being worse at the current low power setting. Increasing the power level makes the de-modulation better but is not accetable due to power budget constraints. Ground controllers decided to switch to the secondary PSK trasmitter on 435.822 MHz. The first two passes over Italy confirmed the correct operation of the spacecraft and WOD are being taken to analize the per-formance of the satellite in this new configuration. BBS is working as usual and status bulletin will be uploaded in the next few days.

73 de ITAMSAT (IO-26) Command Team

/EX
SB SAT @ AMSAT $ANS-078.03
AO-13 OPERATIONS NET SCHEDS

HR AMSAT NEWS SERVICE BULLETIN 078.03 FROM AMSAT HQ
SILVER SPRING, MD MARCH 19, 1994
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Current AMSAT Operations Net Schedule For AO-13

AMSAT Operations Nets are planned for the following times. Mode-B Nets are conducted on AO-13 on a downlink frequency of 145.950 MHz. If, at the start of the OPS Net, the frequency of 145.950 MHz is being used for a QSO, OPS Net enthusiasts are asked to move to the alternate frequency of 145.955 MHz.

Date	UTC	Mode	Phs	NCS	Alt NCS
26-Mar-94	2130	B	084	WA5ZIB	W5IU

Any stations with information on current events would be most welcomed. Also, those interested in discussing technical issues or who have questions about any particular aspect of OSCAR statellite operations, are encouraged to join the OPS Nets. If neither of the Net Control Stations show up, any participant is invited to act as the NCS.

AO-13 ZRO Tests For March 1994

The following schedule of Mode "B" tests were chosen for convenient operating times and favorable squint angles. The tests can be heard on 145.840 MHz. Andy McAlister (WA5ZIB) will conduct all the tests. Mode "JL" tests will no longer occur due to the failure of AO-13's 70CM transmitter.

Day	Date (UTC)	Time	Areas covered
Saturday	Mar. 26, 1994	2315 UTC	NA, SA

Note that the dates and days are shown in "UTC". Any changes will be announced as soon as possible via the AMSAT HF and AO-13 Operations Nets.

All listener reports with date of test and numbers copied should be sent to Andy McAllister (WA5ZIB), AMSAT V.P. User Operations, 14714 Knights Way Drive, Houston, TX 77083-5640. A report will be returned verifying the level of accurate reception. An S.A.S.E. is appreciated but not required.

SSTV ON OSCAR 13

Slow scanners are invited to join the SSTV sessions on AO-13. The frequency is 145.955 MHz. The net meets at 45 minutes before Mode S, and on Mode B following Mode S on Saturdays and Sundays. Join those sessions or convey your wishes for other skeds to wb6llo@amsat.org, and he will coordinate your efforts.

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SB SAT @ AMSAT $ANS-078.04
SAREX STS-59 CORRECTION

HR AMSAT NEWS SERVICE BULLETIN 078.04 FROM AMSAT HQ
SILVER SPRING, MD MARCH 19, 1994
TO ALL RADIO AMATEURS BT
BID: $ANS-078.04

Correction To NASA Landline BBS Phone Number

Last week's AMSAT News Service (ANS) ANS-071.02 bulletin referred to the NASA Info Board BBS at Johnson Space Center as a source of information for Keplerian elements and SAREX bulletins. This bulletin board system was operated and maintained by the Public Affairs Office of the Johnson Space

Center and is now no longer operational.

Johnson Space Center Amateur Radio Club is currently seeking a way to get a small BBS up and running prior to the flight. As soon as a system is established, an announcement will be issued to promulgate and distribute the telephone number.

73,
Dale Martin, KG5U @ KA5KTH.#setx.tx.usa.na
Sec'y, Johnson Space Center ARC
Houston, Texas

/EX
SB SAT @ AMSAT $ANS-078.05
WEEKLY OSCAR STATUS REPORTS

HR AMSAT NEWS SERVICE BULLETIN 078.05 FROM AMSAT HQ
SILVER SPRING, MD MARCH 19, 1994
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Weekly OSCAR Status Reports: 19-MAR-94

AO-13: Current Transponder Operating Schedule:
M QST *** AO-13 TRANSPONDER SCHEDULE *** 1994 Mar 19-Apr 04
Mode-B : MA 0 to MA 90 |
Mode-BS : MA 90 to MA 120 |
Mode-S : MA 120 to MA 122 |<- S beacon only
Mode-S : MA 122 to MA 145 |<- S transponder; B trsp. is OFF
Mode-S : MA 145 to MA 150 |<- S beacon only
Mode-BS : MA 150 to MA 180 | Alon/Alat 180/0
Mode-B : MA 180 to MA 256 |
Omnis : MA 230 to MA 30 | Move to attitude 235/0, Apr 04 240/0, Apr 04
[G3RUH/DB2OS/VK5AGR]

FO-20: The following is the current schedule for transponder operations:
ANALOG MODE:

23-MAR-94 7:52 -TO- 30-MAR-94 8:15 UTC

DIGITAL MODE: Unless otherwise noted above.
[Kazu Sakamoto (JJ1WTK) qga02014@niftyserve.or.jp]

AO-16: Operating normally. [WH6I]

LO-19: Operating normally. [WH6I]

IO-26: Operating normally. [WH6I]

KO-23: Operating normally. [WH6I]

The AMSAT NEWS Service (ANS) is looking for volunteers to contribute weekly OSCAR status reports. If you have a favorite OSCAR which you work on a regular basis and would like to contribute to this bulletin, please send your observations to WD0HHU at his CompuServe address of 70524,2272, on INTERNET at wd0hhu@amsat.org, or to his local packet BBS in the Denver, CO area, WD0HHU @ W0LJF.#NECO.CO.USA.NOAM. Also, if you find that the current set of orbital elements are not generating the correct AOS/LOS times at your QTH, PLEASE INCLUDE THAT INFORMATION AS WELL. The information you provide will be of value to all OSCAR enthusiasts.

/EX